ENVIRONMENTAL ETHICS AND PROCESS PHILOSOPHY

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Attempting to develop environmental ethics raises the question of what is ethics? What is the point of ethics? Is it simply the effort to discriminate right from wrong, good from bad? Or should it also provide the motivation to act and reveal how to act effectively? Should it evaluate individual actions only, or should it be concerned with what is the good life? Should it be concerned only with individuals, or should it be the basis for evaluating institutions, organizations and artifacts? In my view ethics should do all these things, and for this reason, if environmental problems are ever to be addressed effectively, it will be necessary to develop an environmental ethic on the basis of process philosophy.

In his effort to reveal the roots of the ecological crisis, Lynn White Jr. argued that

The artifacts of a society, including its political, social and economic pallem, are shaped primarily by what the mass of individuals in that society believe, at the sub-verbal level, about who they are, about their relation to other people and to the natural environment, and about their destiny.

If this is the case then clearly most of the work of ethical philosophers has been misdirected. It has not addressed basic beliefs about who we are, what is our relation to other people and the environment, and about what is our destiny, but has worked within a particular framework of beliefs, at best spelling out their implications. For the most part, this has involved assuming that people are egoists, and that moral philosophy is ultimately concerned with the common good and with providing reasons why individuals should constrain their egoism to accord with the common good.

This failure of ethics is not surprising, since part of the system of beliefs which dominate the world involves the acceptance of a disjunction between science, concerned with how the world is, and ethics, concerned with how we should act - with aesthetics being a grab-bag of the humanly significant phenomena left over. It is this disjunction which has created the crisis in ethics identified by Alisdair MacIntyre in Arter Virtue, a crisis in which "we have - very largely, if not entirely - lost our comprehension, both theoretical and practical, of morality..." As MacIntyre correctly pointed out, the failure of modern ethics is the failure of the Enlightenment project of reestablishing ethics in the wake of the destruction of the medieval cosmology by the mechanical world-view purveyed by science.

What makes environmental philosophy (along with feminism) so intellectually significant is that this underlying system of beliefs has been brought into question. However, in striving to question and replace the basic beliefs which dominate society, environmental philosophers have called upon diverse authorities: physicists, logicians, Buddhists, Spinoza, Castaneda, Heidegger, Alan Ginsburg, Whitehead and Hegel among others. Whitehead and Hegel represent the tradition of process philosophy.

The active tradition within metaphysics to refine and defend the categories of process philosophy has been a sustained one. Ivor Leclerc's work is exemplary in this regard. A process view of the world has underlain much of the anti-mechanistic tradition in the human sciences, with the symbolic interactionists having been inspired by George Herbert Mead, a process philosopher. Now process philosophy is providing an alternative grand research programme in the natural sciences. As Ilya Prigogine, the 1977 Nobel laureate in Chemistry, argued:

[W]e are in a period of scientific revolution - one in which the very position and meaning of the scientific approach are undergoing reappraisal - a period not unlike the birth of the scientific approach in ancient Greece or of its renaissance in the time of Galileo.

This revolution involves acceptance of the primacy of becoming over being, of the irreducibility of complexity, and that we, as conscious agents investigating the world, are part of the world. This is the essence of the process view of the world.

With such a revolution in science, what is astonishing is the extent to which the structure of ideas which crystallized around the acceptance of the mechanistic view of Nature has sustained itself. Part of the reason for this is that academic life has evolved in such a way that the sort of thinking engaged in by the major philosophers of the past, is no longer acknowledged to be a valid enterprise. In the seventeenth century Hobbes elaborated a new conception of humanity and its place in the world in terms of the new mechanical world-view, or rather, world-orientation, and reread ethics and political philosophy accordingly. Hobbes' conception of humanity is now incorporated by society and people, and is constitutive of social relations in the modern world. Academics now reinterpret Hobbes, but do not consider the possibility of doing what Hobbes did. What is required at present is a total rethinking of all aspects of what it is to be human and of humanity's place in the world in terms of the new conception of Nature, and the discovery of a path to transform society by incorporating the new conception of humanity into social, political and economic relations.

To begin such a task it is first necessary to describe in very simple terms what a process view of the world is. Metaphysical systems are based on a coordinating analogy of metaphor, and the analogy most called upon by process philosophers is that of music. The world is understood not as a collection of objects located in space and changing their position over time, but as a durational process of creative becoming consisting of a multiplicity of self-ordering patterns of activity or processes in various relationships to each other - independent, mutually dependent, hierarchical and so on. These processes emerge to attain a limited autonomy from the conditions of their existence, and
then either through immanent causation or through the under-
mining of their conditions of existence, perish. So, as Frederick
Engels wrote,

...the whole of nature, from the smallest element to the
greatest, from grains of sand to suns, from Protista to man,
has its existence in eternal coming into being and passing
away. In ceaseless flux, in unresting motion and change.

What we generally take to be objects are really ordered patterns
of potentialities or structures: to continue in existence, to resist
penetration an deformation, to reflect or deflect light, and so on,
which are maintained by processes. Space and time are not the
containers of processes but emerge or become with the ordering
of activity as the order of potentialities of processes for inde-
pendence and interaction.

Living organisms can then be conceived of as processes which
not only reproduce themselves but have the capacity to assume
their own significance, to define their environments in terms of
themselves and their needs, and to act accordingly. This allows
organisms to be conceived of as subjects, at least in germinal
furn, and their environments as their worlds, with there being as
many worlds as there are organisms. However, organisms do
not occur in isolation. Life on Earth can be conceived of as a
multiplicity of self-regulating ecosystems, ranging from the
world ecosystem, which maintains the conditions for life on
Earth, to the interdependence of a few species of organisms in a
small community.

Humanity can then be seen as a creative or destructive par-
ticipant in the world ecosystem. Using the categories of process
philosophy, humans can be conceived of as essentially social and
cultural as well as biological, with human organisms becoming
self-conscious subjects by appropriating a cultural heritage
through their relations to other people. On such an account,
people are not only moved by appetites and aversions. They are
struggling to become human by trying to make sense of or to
understand the world, to gain recognition and thereby an identity,
and to gain control over the conditions of their lives. Societies
then be represented as consisting of multiplicities of mutually
dependent, partially autonomous structures generated and
continually reproduced by the struggle for these ends, such
structures being the pre-existent conditions for individuals to
pursue these ends, while constraining the way in which these
ends can be pursued. These structures can then be seen to
facilitate the emergence of processes, ranging from small groups
to socio-economic formations, with dynamics beyond people's
intentions, which then further consEngels people's consciousness
and behaviour. But since people can be conceived of as emerg-
ent processes, as capable of critically reflecting on their cultural
heritage and then acting on the basis of this, they can be con-
ceived of as being able to attain some degree of autonomy from
these conditions of their existence. Individuals must then be
seen as to some extent self-creating, and in creating themselves as
participating in the process of creative becoming of their
society, of humanity and Nature.

Conceived of in such terms, humanity, as part of and within
the world, is one of the processes through which the world is
attaining consciousness of itself, its significance and potential-
ties. The goal of inquiry should be seen as understanding, a
mode of being in the world by which the world becomes intel-
ligible. It is the way we are meaningfully situated in our world
through our bodily interactions, our cultural institutions, our

linguistic tradition, and our historical context. The aim of
science should be to deepen understanding, to facilitate seeing
things in broader perspective, while simultaneously appreciating
more fully the uniqueness of each individual. There is no reason
why the development of understanding so conceived should not
lead to an appreciation of meaning in the world, and to an
appreciation of the relative significance of its different par-
ticipants. And it is impossible to understand beings as proces-
sees of becoming without appreciating their intrinsic value. From
the "universe of death," as Coleridge described the world of
mechanistic science, to a science based on process philosophy
that leads closer to the experience expressed by Wordsworth in
which:

... all
That I behold resired with inward meaning.

Individuals, being like melodies singing themselves within a
symphony, make a contribution in society, to humanity and to
Nature, which remains as part of the becoming of these after they
have ceased to exist as active individuals. Developing their
understanding is participating in the creative becoming of the
world, and the way the world comes to be understood then orients
them for action in relation to this becoming. This involves the
appropriation, use and development of concepts which become
part of social reality by mediating their interactions with each
other, with society and with the rest of Nature. So with each
thought and action people are creating themselves and participat-
ing in the creation of their community and of the world: and the
lives they lead are an indelible contribution to becoming of the
world. The basic ethical question confronted by each individual
is: What contribution to the world are they to make?

In considering this question it is necessary to dispense with the
trifurcation between knowledge, ethics and aesthetics and to
reorient thinking about means and ends. It has been noted by
Nietzsche that it is the tendency to posit the value of an action,
charact or existence to the purpose for which it has acted or lived. The final result is that everything is reduced to a means
for an end, which being put further and further off, finally
 evaporates, leaving the world to appear meaningless. This is the
ultimate nihilistic consequence of the belief in 'progress'. In
terms of process philosophy, it is impossible to conceive of
anything in the becoming of the world as merely a means; but
on the other hand there is no need to reject the notion of an
ultimate end. The ultimate end is the whole duration of the
becoming of the world in which every individLal, every activity
and action is of significance in itself, including anything which is
taken as a means to some further end - just as each note is of
significance in itself in a symphony.

The ideal of ordering everything into simple means-ends
relations in such a world must also be rejected. Participating in
a process of creative becoming, the world cannot be totally
controlled by people. Rather, it is necessary for people to think
in terms of the intrinsic significances of actions and at the same
time how their actions contribute to their own potentialities and
to those of other co-becoming processes. Rather than an
instrumentalist rationality, what is required is a creative rationality
which reflexively acknowledges itself to be participation in the
becoming of the world.

Such self-creation is essentially socio-cultural. People become
selves with a sense of identity through their culturally mediated
achievement of reciprocal recognition. Where a process view of

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the world is assumed by people, and both the essential sociality of human being and the possibility of the emergence of individuality transcending these conditions is acknowledged, as it is among the Fipa of Tanzania,7 then there can be no sharp division between public interest and self interest. Self-formation and commitment to others are seen as indissociable. As Rabbi Hillel put it:

If I am not for myself, who will be for me? 
If I am for myself only, what am I? 
If not now, when?

Ultimately, it is only by participating in and taking responsibility for socially approved activities that people see themselves as able to attain self-hood.

The order which defines what is approved or disapproved and which thereby facilitates the achievement of self-hood can be defined as the moral order. One of the most important tasks for environmental ethics is then identifying the effective moral order through which people gain or fail to gain a sense of identity, to reveal how this helps or undermines efforts to deal with environmental problems, and then to develop new possibilities of gaining a sense of identity to replace destructive forms. The first part of this task is too complex to consider here, but a major requirement for establishing alternative ways for people to achieve an identity is through the redefinition of ethical concepts. There are three which are particularly important in this regard: justice, duty and integrity.

Justice I will redefine as the appropriate recognition and acknowledgement in thought, feelings and action of the nature, and thereby the meaning and significance of anything. Justice so conceived requires of people sensitivity, consideration, imagination and compassion to understand the situations and perspectives of other beings - whether human or non-human, breadth of understanding to appreciate the past causes and present dynamics responsible for existing conditions and the incidental effects of actions, and judgement to balance different claims to justice. It is the notion of justice which Simone Weil brought to light, when she pointed out the radical difference between calls for justice and assertions of rights:

If you say to someone who has ears to hear: "What you are doing to me is not just," you may touch and awaken at its source the spirit of attention and love. But it is not the same with words like "I have the right..." They evoke a latent war and awaken the spirit of contention.8

Underlying the environmental crisis is the basic injustice of defining the world as a mechanical order of things. It is this which Peter Singer was reacting against, when he protested against treating animals "like machines that convert low-priced fodder into high-priced flesh..."9 But to justify Singer's position it is necessary to establish and defend an alternative conception of life to that offered by mechanistic materialism, and it is process philosophy which supplies this.

As far as the environment is concerned, the most significant actions people perform are as functionaries of organizations. Ignoring this has rendered milch of moral philosophy sterile. Organizations are defined by the ideals and goals they are committed to. To act as a functionary is to be constrained to define situations, people, organizations and Nature in a particular way in accordance with the ideals and goals of the organization. Two ethical concepts are of prime significance in this: duty and its negative correlate, corruption. In the past these have generally been taken to define whether people act or fail to fulfill the expectations of their positions in accordance with the ideals and goals of their organizations. However, since Nuremburg, duty can be taken to include taking responsibility for the ideals and goals of one's organizations and what role one is playing in realizing these. Failure by individuals as institutional actors to consider whether the way the world is conceived by them is just or unjust can itself by designated as corrupt.

The challenge to individuals is whether to take responsibility for the way they conceive the world in their actions, and then, to have the courage to act upon their own judgements. Such action will almost invariably make life more difficult for them. But taking responsibility for one's conception of the world and acting according to one's subsequent convictions gives a unity to one's life beyond that of being merely cyphers of social pressures and forces. It is this unity or wholeness which can be designated integrity. In the present world heading towards ecological catastrophe because the dominant institutions of industrialism are based on an unjust conception of both Nature and humanity, integrity is called for on a massive scale.

Considering ethics without considering politics is to truncate the subject in a way which guarantees its ineffectiveness. For Aristotel, ethics and politics were indissociable. His Nicomachean Ethics was devoted to working out what is the highest good for humans, the ultimate end which is desired for its own sake and for which all other ends are means, while his Politics was devoted to working out how societies should be organized to enable people to live the best possible life. While one might disagree with Aristotle's conclusions as to what the highest good for humans is, it is difficult to conceive of a benediction of the relation between ethics and politics, and how to conceive the fundamental problem of political philosophy.

The answer given to the rust and most fundamental question: what is the ultimate end of life, will depend on what conception of humans and their place in the world is adopted. Aristotle argued that the ultimate end of life is spiritual well-being (eudaimonia) which is achieved by the "activity of the soul in conformity with excellence or virtue, and if there are several virtues, in conformity with the best and mostcomplete."10 On the basis of his general metaphysics and corresponding conception of the nature of humans, he argued that the highest virtue is the activity concerned with theoretical knowledge or contemplation. In relation to politics he then argued that the ideal polis is one "which has virtue sufficiently supported by material resources to facilitate participation in the actions which virtue calls for.,12 In terms of process philosophy people are striving to orient themselves, to gain recognition, and to gain control over the conditions of their existence. If the process view of the world is valid, societies should be organized to facilitate the achievement of these ends. They should be designed to promote cultural life, justice and liberty, where cultural life is understood as the communicative activity in which, through dialogue, literature and other forms of communication, ways of understanding, experiencing and modes of being in the world are revealed, tried out and questioned, further developed or replaced, problems defined and projects of action formulated, elaborated and evaluated; justice is understood as appropriately recognizing the significance of all entities, both humans and non-humans, in social practices and in institutions; and liberty is understood as
the condition in which people can live with integrity. This requires not only freedom from constraints, but also the means for people to form relationships and make commitments to others, to develop their abilities and their understanding of the world, and to participate in the economic, political and cultural processes of society. Negative liberty is important not in itself but as a condition for achieving positive liberty. So understood, cultural life, justice and liberty must be seen as mutually dependent, though irreducible to each other. Existing institutions should be evaluated and preserved, transformed or abolished according to whether and how much they facilitate the life of culture, justice and liberty.

With this conception of politics, economics must be reformulated and the environment must be given the central place: As the condition for the maintenance and reproduction of society and for the realization of humanity's highest ends, and as consisting of non-human life forms with a significance in their own right which, if justice is to be done, must be appropriately recognized. The most important form of justice in terms of which any society and every institution in society must be evaluated is its affect on its environment.

The formulation of such ideas in themselves is of little significance. What is required is a determined effort to live according to this new conception of the world. Such efforts are not likely to be successful in isolation. They need to be seen as part of a movement. The unity of this movement cannot be defined only in terms of some general notion of environmental problems. It needs to be part of an alternative hegemonic culture. Fully articulated, process philosophy promises to provide the basis for such a culture, just as mechanistic materialism provided the basis for the culture of modern industrialism.

NOTES
5. On this, see Michael Polanyi and Harry Prosch, Meaning, Chicago: University of Chicago Press, 1975.

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